

# DIGITAL PROCESSOR CONTROLLED METHOD AND CIRCUIT FOR RETRACTING A HEAD CARRIAGE ASSEMBLY TO A PARKED POSITION IN A MASS DATA STORAGE DEVICE, OR THE LIKE

## Abstract

A retract circuit (40) for retracting a data transducer carriage assembly (17) of a mass data storage device (10) to a retracted position has a digital state machine (55) that is user programmable to operate in a selected retract mode. An analog control circuit (44) is provided for receiving control signals from the digital state machine (55) for providing analog retract signals to move the data transducer carriage assembly (70). The digital state machine (55) is user programmable to operate in constant voltage, velocity detect, float and pulse, and crash stop detect modes. Preferably, the digital state machine (55) is programmed to detect a velocity of the data transducer carriage assembly (17). The digital state machine (55) also is preferably programmed to detect an error velocity of the data transducer carriage assembly (17) from a difference

of a measured voltage across the data transducer driver (22) from a predetermined voltage.